

MATERIAL SAFETY DATA SHEET**Product Trade Name:** GELTONE® V**Revision Date:** 13-Jan-2014**Revision Number:** 17**1. PRODUCT AND COMPANY IDENTIFICATION****Product Identifier**

Product Trade Name: GELTONE® V
Synonyms: None
Chemical Family: Blend
Internal ID Code: HM003657

Product Use

Application: Viscosifier

Manufacturer's Name and Contact Details

Name and Address Halliburton Energy Services
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Prepared By

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2. HAZARD(S) IDENTIFICATION**WHMIS Classification**

WHMIS Hazard Class D2A Very Toxic Materials
Crystalline silica

WHMIS Symbol(s)**Summary of hazards of the product****Hazard Overview**

Breathing crystalline silica can cause lung disease, including silicosis and lung cancer. Crystalline silica has also been associated with scleroderma and kidney disease.

This product contains quartz, cristobalite, and/or tridymite which may become airborne without a visible cloud. Avoid breathing dust. Avoid creating dusty conditions. Use only with adequate ventilation to keep exposures below recommended exposure limits. Wear a NIOSH certified, European Standard EN 149, or equivalent respirator when using this product. Review the Material Safety Data Sheet (MSDS) for this product, which has been provided to your employer.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances	CAS Number	PERCENT (w/w)	HMIRA Registry Number	Filing Date
Isopropanol	67-63-0	1 - 5%	Not applicable	Not applicable
Crystalline silica, quartz	14808-60-7	1 - 5%	Not applicable	Not applicable
Crystalline silica, cristobalite	14464-46-1	0.1 - 1%	Not applicable	Not applicable
Crystalline silica, tridymite	15468-32-3	0.1 - 1%	Not applicable	Not applicable

4. FIRST AID MEASURES**Description of first aid measures****Inhalation**

If inhaled, remove from area to fresh air. Get medical attention if respiratory irritation develops or if breathing becomes difficult.

Eyes

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.

Skin

Wash with soap and water. Get medical attention if irritation persists.

Ingestion

Under normal conditions, first aid procedures are not required.

Most important symptoms and effects, both acute and delayed

May cause mild eye, skin, and respiratory irritation. Breathing crystalline silica can cause lung disease, including silicosis and lung cancer. Crystalline silica has also been associated with scleroderma and kidney disease.

Indication of any immediate medical attention and special treatment needed**Notes to Physician**

Treat symptomatically

5. FIRE FIGHTING MEASURES**Extinguishing media****Suitable Extinguishing Media**

All standard fire fighting media

Extinguishing media which must not be used for safety reasons

None known.

Special hazards arising from the substance or mixture**Special Exposure Hazards**

Not applicable.

Advice for firefighters**Special Protective Equipment for Fire-Fighters**

Not applicable.

Hazardous combustion products

Amorphous silica may transform at elevated temperatures to tridymite (870 C) or cristobalite (1470 C).

6. ACCIDENTAL RELEASE MEASURES**Personal precautions and emergency procedures****Protective Equipment**

Use appropriate protective equipment. Avoid creating and breathing dust.

Environmental Precautionary Measures

None known.

Procedure for Cleaning / Absorption

Collect using dustless method and hold for appropriate disposal. Consider possible toxic or fire hazards associated with contaminating substances and use appropriate methods for collection, storage and disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

This product contains quartz, cristobalite, and/or tridymite which may become airborne without a visible cloud. Avoid breathing dust. Avoid creating dusty conditions. Use only with adequate ventilation to keep exposure below recommended exposure limits. Wear a NIOSH certified, European Standard En 149, or equivalent respirator when using this product. Material is slippery when wet.

Conditions for safe storage and Incompatible materials for storage

Store in a cool, dry location. Use good housekeeping in storage and work areas to prevent accumulation of dust. Close container when not in use. Do not reuse empty container. Product has a shelf life of 24 months.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

Exposure Limits

Substances	CAS Number	ACGIH TLV-TWA	OSHA PEL-TWA
Isopropanol	67-63-0	TWA: 200 ppm STEL: 400 ppm	400 ppm
Crystalline silica, quartz	14808-60-7	TWA: 0.025 mg/m ³	10 mg/m ³ %SiO ₂ + 2
Crystalline silica, cristobalite	14464-46-1	TWA: 0.025 mg/m ³	1/2 x 10 mg/m ³ %SiO ₂ + 2
Crystalline silica, tridymite	15468-32-3	0.05 mg/m ³	1/2 x 10 mg/m ³ %SiO ₂ + 2

Appropriate engineering controls

Engineering Controls

Use approved industrial ventilation and local exhaust as required to maintain exposures below applicable exposure limits.

Personal Protective Equipment (PPE)

Respiratory Protection

Wear a NIOSH certified, European Standard EN 149 (FFP2/FFP3), or equivalent respirator when using this product.

Hand Protection

Normal work gloves.

Skin Protection

Wear clothing appropriate for the work environment. Dusty clothing should be laundered before reuse. Use precautionary measures to avoid creating dust when removing or laundering clothing.

Eye Protection

Wear safety glasses or goggles to protect against exposure.

Other Precautions

None known.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State: Powder

Color: Tan

Odor: Mild

Odor Threshold: No information available

Property

Values

Remarks/ - Method

pH:

No information available.

pH Concentration of Solution:

No information available.

Freezing Point/Range

No information available.

Melting Point/Range

No information available.

Boiling Point/Range (C):

No information available.

Flash Point/Range (C):	No information available.
Flash Point Method:	No information available.
Autoignition Temperature (C):	No information available.
Flammability Limits in Air - Lower (%):	No information available.
Flammability Limits in Air - Upper (%):	No information available.
Evaporation Rate (Butyl Acetate=1):	No information available.
Vapor Pressure @ 20 C (mmHg):	No information available.
Vapor Density (Air=1):	No information available.
Specific Gravity @ 20 C (Water=1):	1.6
Solubility in Water (g/100ml):	Insoluble
Solubility in other solvents	No information available.
Partition Coefficient/n-Octanol/Water:	No information available.
Decomposition Temperature (C):	No information available.
Viscosity	No information available
Explosive Properties	No information available
Oxidizing Properties	No information available

Other Information

Molecular Weight (g/mole):	No information available.
VOC Content (%)	No information available

10. STABILITY AND REACTIVITY

Conditions of Reactivity

Conditions to Avoid	None anticipated
Hazardous Polymerization:	Will Not Occur

Chemical Stability

Stable

Sensitivity to Static Discharge

Not available

Sensitivity to Mechanical Impact

Not available

Incompatible materials

Hydrofluoric acid.

Hazardous Decomposition Products

Amorphous silica may transform at elevated temperatures to tridymite (870 C) or cristobalite (1470 C).

11. TOXICOLOGICAL INFORMATION

Routes of entry

Eye or skin contact, inhalation.

Information on Toxicological Effects**Acute effects from exposure****Inhalation**

Inhaled crystalline silica in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (IARC, Group 1). There is sufficient evidence in experimental animals for the carcinogenicity of tridymite (IARC, Group 2A).

Breathing silica dust may cause irritation of the nose, throat, and respiratory passages. Breathing silica dust may not cause noticeable injury or illness even though permanent lung damage may be occurring. Inhalation of dust may also have serious chronic health effects (See "Chronic Effects/Carcinogenicity" subsection below).

Eye Contact

May cause mild eye irritation.

Skin Contact
Ingestion

May cause mild skin irritation.
Irritation of the mouth, throat, and stomach.

Chronic effects from exposure
Chronic Effects/Carcinogenicity

Silicosis: Excessive inhalation of respirable crystalline silica dust may cause a progressive, disabling, and sometimes-fatal lung disease called silicosis. Symptoms include cough, shortness of breath, wheezing, non-specific chest illness, and reduced pulmonary function. This disease is exacerbated by smoking. Individuals with silicosis are predisposed to develop tuberculosis.

Cancer Status: The International Agency for Research on Cancer (IARC) has determined that crystalline silica inhaled in the form of quartz or cristobalite from occupational sources can cause lung cancer in humans (Group 1 - carcinogenic to humans) and has determined that there is sufficient evidence in experimental animals for the carcinogenicity of tridymite (Group 2A - possible carcinogen to humans). Refer to IARC Monograph 68, Silica, Some Silicates and Organic Fibres (June 1997) in conjunction with the use of these minerals. The National Toxicology Program classifies respirable crystalline silica as "Known to be a human carcinogen". Refer to the 9th Report on Carcinogens (2000). The American Conference of Governmental Industrial Hygienists (ACGIH) classifies crystalline silica, quartz, as a suspected human carcinogen (A2).

There is some evidence that breathing respirable crystalline silica or the disease silicosis is associated with an increased incidence of significant disease endpoints such as scleroderma (an immune system disorder manifested by scarring of the lungs, skin, and other internal organs) and kidney disease.

Irritancy of product
Irritation

Non-irritating to the skin Non-irritating to the eye

Sensitization of product
Sensitization

Not confirmed to cause skin or respiratory sensitization.

Mutagenicity
Mutagenic Effects

Not regarded as mutagenic

Carcinogenicity
Carcinogenic Effects

Contains a small amount (< 1%) of crystalline silica, a suspected carcinogen according to NTP and IARC.

Reproductive Toxicity
Reproductive Toxicity

This product does not contain any known or suspected reproductive hazards

Teratogenicity/embryotoxicity
Teratogenic

Not a teratogen or embryotoxin.

Toxicologically synergistic material **Isopropanol:** Enhanced by the toxicity of carbon tetrachloride, 1,1,2-trichloroethane, chloroform, trichloroethylene, and dimethylnitrosamine (possibly carbon tetrachloride).

Acute Toxicity

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Isopropanol	67-63-0	4396 mg/kg (Rat) 3600 mg/kg (mouse)	12800 mg/kg (Rat) 12870 mg/kg (Rabbit)	72.6 mg/L (Rat) 4 h
Crystalline silica, quartz	14808-60-7	500 mg/kg (Rat)	No data available	No data available
Crystalline silica, cristobalite	14464-46-1	No data available	No data available	No data available
Crystalline silica, tridymite	15468-32-3	No data available	No data available	No data available

12. ECOLOGICAL INFORMATION

Toxicity

Ecotoxicity Effects

Substances	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Isopropanol	67-63-0	EC50: > 1000 mg/l(Desmodesmus subspicatus)	LC50: 9640 mg/l (Pimephales promelas)	No information available	EC50: 13299 mg/l (Daphnia magna)
Crystalline silica, quartz	14808-60-7	No information available	No information available	No information available	No information available
Crystalline silica, cristobalite	14464-46-1	No information available	No information available	No information available	No information available
Crystalline silica, tridymite	15468-32-3	No information available	No information available	No information available	No information available

Persistence and Degradability

No information available

Bioaccumulation potential

No information available

Mobility in soil

No information available

Results of PBT and vPvB assessment

No information available.

Other adverse effects

Endocrine Disruptor Information

This product does not contain any known or suspected endocrine disruptors

13. DISPOSAL CONSIDERATIONS

Disposal Method Bury in a licensed landfill according to federal, state, and local regulations.

Contaminated Packaging Follow all applicable national or local regulations.

14. TRANSPORT INFORMATION

Canadian TDG

UN Number: Not restricted.
 UN Proper Shipping Name: Not restricted
 Transport Hazard Class(es): Not applicable

IATA/ICAO

UN Number: Not restricted.
 UN Proper Shipping Name: Not restricted
 Transport Hazard Class(es): Not applicable

IMDG/IMO

UN Number: Not restricted.
 UN Proper Shipping Name: Not restricted
 Transport Hazard Class(es): Not applicable

Special Precautions for User None

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

15. REGULATORY INFORMATION

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Canadian Regulations**Canadian DSL Inventory**

All components listed on inventory or are exempt.

WHMIS Hazard ClassD2A Very Toxic Materials
Crystalline silica**WHMIS Symbol(s)****US Regulations****US TSCA Inventory**

All components listed on inventory or are exempt.

16. OTHER INFORMATION**Preparation Information****Prepared By**Chemical Compliance
Telephone: 1-580-251-4335
e-mail: fdunexchem@halliburton.com**Revision Date:**

13-Jan-2014

Not applicable

Additional Information

For additional information on the use of this product, contact your local Halliburton representative.

For questions about the Safety Data Sheet for this or other Halliburton products, contact Chemical Compliance at 1-580-251-4335.

Key or legend to abbreviations and acronyms

WHMIS: Workplace Hazardous Materials Information System

Key literature references and sources for datawww.ChemADVISOR.com/**Disclaimer Statement**

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*****END OF MSDS*****